

METHODOLOGY BOOK FOR:

- MSCI WORLD BUSINESS INVOLVEMENT SCREENS SERIES E INDEX**
- MSCI EMU BUSINESS INVOLVEMENT SCREENS SERIES E INDEX**

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Contents

- 1 Introduction 3
- 2 MSCI ESG Research 4
 - 2.1 MSCI ESG Controversies 4
 - 2.2 MSCI ESG Business Involvement Screening Research 4
 - 2.3 MSCI Climate Change Metrics 4
- 3 Index Construction Methodology 6
 - 3.1 Underlying Universe 6
 - 3.2 Eligibility Criteria 6
 - 3.2.1 Values and Climate Change - based Exclusions 6
 - 3.2.2 ESG Controversies Score Eligibility 7
 - 3.3 Weighting Scheme 7
- 4 Maintaining the Indexes 8
 - 4.1 Quarterly Index Reviews 8
 - 4.2 Ongoing Event-Related Changes 8
- Appendix – ESG Screening Criteria 10

1 Introduction

The MSCI World Business Involvement Screens Series E Index and the MSCI EMU Business Involvement Screens Series E Index (the “Indexes”) aim to represent the performance of a free float adjusted market capitalization weighted investment strategy that excludes companies associated with controversial, conventional and nuclear weapons. The Indexes also exclude companies associated with tobacco as well as those that derive revenue or are involved in thermal coal and oil and gas related activities.

2 MSCI ESG Research

The Indexes use research provided by MSCI ESG Research LLC. In particular, these indexes use the following three MSCI ESG Research products: MSCI ESG Controversies, MSCI Business Involvement Screening Research and MSCI Climate Change Metrics.

For details on MSCI ESG Research’s full suite of ESG products, please refer to: <https://www.msci.com/esg-investing>

2.1 MSCI ESG CONTROVERSIES

MSCI ESG Controversies (formerly known as MSCI Impact Monitor) provides assessments of controversies concerning the negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with “0” being the most severe controversy.

For more details on MSCI ESG Controversies Score, please refer to: <https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>

2.2 MSCI ESG BUSINESS INVOLVEMENT SCREENING RESEARCH

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (ESG) standards and restrictions reliably and efficiently.

For more details on MSCI ESG Business Involvement Screening Research, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf

2.3 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics is designed to support investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, and factoring climate change research into their risk management processes. It provides Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/climate-change-solutions>

3 Index Construction Methodology

3.1 UNDERLYING UNIVERSE

The selection universe for the Indexes is defined by the constituents of their respective MSCI parent index (the “Parent Index”), as shown in the table below.

Index Name	Parent Index
MSCI World Business Involvement Screens Series E Index	MSCI World Index
MSCI EMU Business Involvement Screens Series E Index	MSCI EMU Index

3.2 ELIGIBILITY CRITERIA

The Indexes use research provided by MSCI ESG Research LLC to determine eligibility for index inclusions.

3.2.1 VALUES AND CLIMATE CHANGE - BASED EXCLUSIONS

The Indexes use MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Companies that meet the business involvement criteria are excluded from the Indexes. Please refer to the Appendix for details on these criteria.

- Controversial Weapons
- Nuclear Weapons
- Conventional Weapons
- Tobacco
- Thermal Coal Mining
- Unconventional Oil & Gas Extraction
- Conventional Oil & Gas Extraction
- Thermal Coal-based Power Generation
- Oil & Gas-based Power Generation
- Nuclear Power Generation

3.2.2 ESG CONTROVERSIES SCORE ELIGIBILITY

The Indexes use MSCI ESG Controversies Scores to identify those companies that are involved in very serious controversies involving the environmental, social, or governance impact of their operations and/or products and services. Companies are required to have an MSCI ESG Controversies Score of 1 or above to be eligible for inclusion in the Indexes.

3.3 WEIGHTING SCHEME

The remaining securities, after the exclusion based on the eligibility criteria, are weighted as per their free-float adjusted market capitalization.

4 Maintaining the Indexes

4.1 QUARTERLY INDEX REVIEWS

The Indexes are reviewed and the exclusions are determined on a quarterly basis to coincide with the regular Semi-Annual and Quarterly Index Reviews of the MSCI Global Investable Market Indexes. The changes are implemented as of the close of the last business day of February, May, August and November.

In general, MSCI uses MSCI ESG Research data (including MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews for the rebalancing of the Indexes. For some securities, such data may not be published by MSCI ESG Research by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of the Indexes.

The pro forma Indexes are in general announced nine business days before the effective date.

4.2 ONGOING EVENT-RELATED CHANGES

The general treatment of corporate events in the Indexes aim to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor’s participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved.

The following section briefly describes the treatment of common corporate events within the Indexes.

No new securities will be added (except where noted below) to the Indexes between Index Reviews. For cases where additions are noted below, securities will be added to the index only if added to the Parent Index.

Parent Index deletions will be reflected simultaneously.

EVENT TYPE

EVENT DETAILS

New additions to the Parent Index

A new security added to the Parent Index (such as IPO and other early inclusions), will not be added to the index.

Spin-Offs

All securities created as a result of the spin-off of an existing index constituent will not be added to the index at the time of event implementation.

Merger/Acquisition

If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.

Changes in Security Characteristics

A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.). Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology book.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>.

Appendix – ESG Screening Criteria

Companies, whose activities meet the following values- and climate change-based criteria, as evaluated by MSCI ESG Research, are excluded from the Indexes:

- Controversial Weapons
 - All companies with any tie to Controversial Weapons (cluster munitions, landmines, depleted uranium weapons, biological/chemical weapons, blinding lasers, non-detectable fragments and incendiary weapons), as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes available at <https://www.msci.com/index-methodology>
- Nuclear Weapons
 - All companies that manufacture nuclear warheads and/or whole nuclear missiles
 - All companies that manufacture components that were developed or are significantly modified for exclusive use in nuclear weapons (warheads and missiles)
 - All companies that manufacture or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons
 - All companies that provide auxiliary services related to nuclear weapons
 - All companies that manufacture components that were not developed or not significantly modified for exclusive use in nuclear weapons (warheads and missiles) but can be used in nuclear weapons
 - All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons but have the capability to deliver nuclear weapons
 - All companies that manufacture components for nuclear-exclusive delivery platforms
- Conventional Weapons
 - All companies deriving 5% or more revenue from the production of conventional weapons
 - All companies deriving 15% or more aggregate revenue from weapons systems, components, and support systems and services

- Tobacco
 - All companies classified as a “Producer”
 - All companies deriving 5% or more aggregate revenue from the production, distribution, retail and supply of tobacco-related products
- Thermal Coal Mining
 - All companies deriving more than 10% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading
- Unconventional Oil & Gas Extraction
 - All companies deriving more than 10% revenue (either reported or estimated) from unconventional oil and gas production. It includes revenue from the production of oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane, as well as revenue from onshore or offshore oil and gas production in the Arctic region. It excludes revenue from conventional oil and gas production including deepwater, shallow water, and other onshore/offshore oil and gas.
- Conventional Oil & Gas Extraction
 - All companies deriving more than 0% revenue (either reported or estimated) from conventional oil and gas production. It includes revenue from the production of deepwater, shallow water, and other onshore/offshore oil and gas. It excludes revenue from unconventional oil and gas production (oil sands, shale oil, shale gas) and onshore/offshore oil and gas production in the Arctic region.
- Thermal coal-based Power Generation
 - All companies generating more than 10% of their total electricity from thermal coal in a given year
 - All companies that have more than 10% of installed capacity attributed to thermal coal in a given year
 - All companies deriving more than 10% revenue (either reported or estimated) from thermal coal-based power generation

- Oil & Gas-based Power Generation
 - All companies generating more than 30% of their total electricity from liquid fuel and natural gas in a given year
 - All companies that have more than 30% of installed capacity attributed to liquid fuel and natural gas in a given year
 - All companies deriving more than 30% revenue (either reported or estimated) from liquid fuel- and natural gas-based power generation
- Nuclear Power Generation
 - All companies generating more than 30% of their total electricity from nuclear power in a given year
 - All companies that have more than 30% of installed capacity attributed to nuclear sources in a given fiscal year
 - All companies deriving more than 30% revenue (either reported or estimated) from ownership or operation of nuclear power plants

TIMELINE OF SCREEN ADJUSTMENT

Some criteria from the above-mentioned screens, including Tobacco, Thermal Coal Mining, Thermal Coal-based Power Generation, and Unconventional Oil & Gas Extraction, will adjust between 2020 and 2025 to reflect the adoption of stricter thresholds over time. The changes will be implemented at the November Index Review of the preceding year, so that the index is compliant for the relevant calendar year.

Screens that will be modified

- Tobacco

2019 to 2024	2025 onwards
All companies classified as a “Producer”; All companies deriving 5% or more aggregate revenue from the production, distribution, retail and supply of tobacco-related products	All companies that have an industry tie to tobacco products through the distributor, licensor, retailer, supplier, or ownership categories.

- **Thermal Coal Mining**

2019 to 2021	2022 to 2024	2025 onwards
All companies deriving more than 10% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.	All companies deriving more than 5% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.	All companies deriving more than 0% revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties.

- **Thermal Coal-based Power Generation**

2019 to 2024	2025 onwards
<p>All companies generating more than 10% of their total electricity from thermal coal in a given year;</p> <p>All companies that have more than 10% of installed capacity attributed to thermal coal in a given year;</p> <p>All companies deriving more than 10% revenue (either reported or estimated) from thermal coal-based power generation</p>	<p>All companies generating more than 0% of their total electricity from thermal coal in a given year;</p> <p>All companies that have more than 0% of installed capacity attributed to thermal coal in a given year;</p> <p>All companies deriving more than 0% revenue (either reported or estimated) from thermal coal-based power generation</p>

- **Unconventional Oil & Gas Extraction**

2019 to 2021	2022 to 2024	2025 onwards
All companies deriving more than 10% revenue (either reported or estimated) from	All companies deriving more than 5% revenue (either reported or estimated) from	All companies deriving more than 0% revenue (either reported or estimated) from

unconventional oil and gas production.	unconventional oil and gas production.	unconventional oil and gas production.
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